around the vehicle **1** is lower than a predetermined threshold value, it is judged that the high efficiency recovery condition has not been satisfied.

[0136] For example, in a region with a low CO_2 concentration, the amount of recovery of CO_2 in the CO_2 recovery device **20** is relatively small compared to the electric power consumed by operation of the CO_2 recovery device **20** (that is, the operation of the suction pump **22**). Therefore, if the concentration of CO_2 contained in the gas flowing into the CO_2 recovery part **21** is not equal to or greater than a predetermined threshold value, it is predicted that the efficiency of recovery of CO_2 will not become equal to or greater than a preset predetermined efficiency.

[0137] On the other hand, in the region of a high CO_2 concentration, the amount of recovery of CO_2 in the CO_2 recovery device **20** is relatively large compared to the electric power consumed by operation of the CO_2 recovery device **20**. Therefore, if the concentration of CO_2 contained in the gas flowing into the CO_2 recovery part **21** is equal to or greater than a predetermined threshold value, it is predicted that the efficiency of recovery of CO_2 will become equal to or greater than a preset predetermined efficiency.

[0138] Others

[0139] Above, preferred embodiments according to the present disclosure were explained. However, the present disclosure is not limited to these embodiments and can be corrected and changed in various ways within the scope of the claims.

1. A control device which is mounted in a vehicle including a battery and a CO_2 recovery device using electric power of the battery to recover CO_2 contained in inflowing gas, and which controls the CO_2 recovery device, wherein

the control device permits operation of the CO_2 recovery device in the case where a high efficiency recovery condition, at which it is predicted that the efficiency of recovery of CO_2, showing a ratio of the amount of recovery of CO_2 in the CO_2 recovery device with respect to the electric power consumed by the battery, will become equal to or greater than a preset predetermined efficiency, is satisfied, and prohibits operation of the CO_2 recovery device in the case where the high efficiency recovery condition is not satisfied.

2. The control device according to claim **1**, wherein

the gas flowing into the CO_2 recovery device is a gas discharged from an internal combustion engine mounted in the vehicle,

the CO_2 recovery device includes:

a CO_2 recovery part recovering CO_2 in the gas flowing into the CO_2 recovery device;

a cooling part using the electric power of the battery to cool the CO_2 recovery part; and

a suction part using the electric power of the battery to suck in the gas and make the gas flow to the CO_2 recovery part, and

the control device permits operations of the cooling part and suction part if the high efficiency recovery condition is satisfied, and prohibits operations of the cooling part and suction part if the high efficiency recovery condition is not satisfied.

3. The control device according to claim **1**, wherein

the control device:

permits the operation due to the high efficiency recovery condition being satisfied, if it is predicted that the vehicle will be driven by equal to or greater than a predetermined distance; and

prohibits the operation due to the high efficiency recovery condition not being satisfied, if it is predicted that the vehicle will not be driven by equal to or greater than a predetermined distance.

4. The control device according to claim **1**, wherein

the control device:

permits the operation due to the high efficiency recovery condition being satisfied, if a water temperature of the internal combustion engine of the vehicle is equal to or greater than a predetermined temperature; and

prohibits the operation due to the high efficiency recovery condition not being satisfied, if the water temperature is lower than the predetermined temperature.

5. The control device according to claim **1**, wherein

the control device:

permits the operation due to the high efficiency recovery condition being satisfied, if a predetermined time has elapsed from cold start of the internal combustion engine of the vehicle; and

prohibits the operation due to the high efficiency recovery condition not being satisfied, if the predetermined time has not elapsed from cold start.

6. The control device according to claim **1**, wherein

the gas flowing into the CO_2 recovery device is air around the vehicle,

the CO_2 recovery device includes:

a CO_2 recovery part recovering CO_2 in the gas flowing into the CO_2 recovery device; and

a suction part using the electric power of the battery to suck in the gas and make the gas flow to the CO_2 recovery part, and

the control device:

permits the operation due to the high efficiency recovery condition being satisfied, if a concentration of CO_2 contained in the air around the vehicle is equal to or greater than a predetermined threshold value; and

prohibits the operation due to the high efficiency recovery condition is not satisfied if the concentration of CO_2 is lower than the predetermined threshold value.

7. The control device according to claim **1**, wherein

the vehicle further includes a user input part receiving an operation prohibit instruction for prohibiting the operation, from the user of the vehicle, and

the control part prohibits the operation even when the high efficiency recovery condition is satisfied, if the user input part receives the operation prohibit instruction.

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